

Message

From: Owen, Colleen [COWen@mt.gov]
Sent: 4/13/2017 8:28:53 PM
To: Michael Ritorto [mritorto@rouxinc.com]; lidewitt@mt.gov
CC: Cirian, Mike [Cirian.Mike@epa.gov]
Subject: RE: CFAC Phase I Site Characterization Round 2 Surface Water and Groundwater Sampling Results

Flag: Flag for follow up

Thanks, Mike – I received it this time.

COLLEEN OWEN
Environmental Science Specialist
Opencut Mining Section
Kalispell Field Office
DEPARTMENT OF ENVIRONMENTAL QUALITY
(406) 755-8966 – Office

From: Michael Ritorto [mailto:mritorto@rouxinc.com]
Sent: Thursday, April 13, 2017 2:05 PM
To: Dewitt, Lisa; Owen, Colleen
Cc: Cirian.Mike@epa.gov
Subject: FW: CFAC Phase I Site Characterization Round 2 Surface Water and Groundwater Sampling Results

Hello Lisa and Colleen,

This emailed bounce back the first time, so I'm trying to resend to you both with a smaller file size.

Michael Ritorto | Principal Hydrogeologist/Office Manager | Roux Associates, Inc.
209 Shafter Street, Islandia, NY 11749
Main: 631-232-2600 | Direct: 631-630-2370
Email: mritorto@rouxinc.com | Website: www.rouxinc.com

ROUX Environmental Consulting
& Management

We solve our clients' most challenging environmental problems

NOTICE: This electronic communication, including any authorized attachments, contains information that may be legally privileged, protected, confidential and/or exempt from disclosure or certain types of use under applicable law. This information is for the sole use of the intended recipient(s). If you are not the intended recipient(s) or the employee or agent responsible for delivery of this message to the intended recipient(s), you are hereby notified that any review, use, disclosure, copying, distribution or the taking of any action in reliance on the contents of this e-mail or any attachments is strictly prohibited. You are further advised that review by an individual other than the intended recipient(s) shall not constitute a waiver of any attorney-client privilege which may apply to this communication. If you have received this communication in error, please notify the sender immediately by return e-mail, permanently delete this e-mail and any attachments from all computers on which they may be stored and destroy any print-outs of this email and any attachments.

From: Michael Ritorto
Sent: Thursday, April 13, 2017 3:47 PM
To: Cirian.Mike@epa.gov
Cc: Andrew Baris (abaris@rouxinc.com) <abaris@rouxinc.com>; Laura Jensen <lensen@rouxinc.com>; swright@cfaluminum.com; John.Stroiazzo@glencore-ca.com; lidewitt@mt.gov; cowen@mt.gov; Hoogerheide, Roger

Subject: CFAC Phase I Site Characterization Round 2 Surface Water and Groundwater Sampling Results

Mr. Cirian,

The Scope of Work outlined in the Columbia Falls Aluminum Company, LLC (CFAC) Remedial Investigation / Feasibility Study (RI/FS) Work Plan and Phase I Site Characterization Sampling and Analysis Plan (Phase I SAP) includes four rounds of surface water and groundwater sampling. The first results of the first round of sampling (Round 1), completed in September 2016, were provided in the Phase I Site Characterization Data Summary Report, submitted to EPA February 27, 2017. As requested by EPA during the CFAC RI/FS project review conference call on March 2, 2017, this email provides a summary of the results for the Round 2 surface water and groundwater sampling event (Round 2) conducted in December 2016.

During Round 2, a total of 18 surface water samples were collected from Site surface water features and a total of 58 groundwater samples were collected (45 monitoring wells screened in the upper hydrogeologic unit and 13 monitoring wells screened below the upper hydrogeologic unit). All the electronic data deliverable (EDD) laboratory reports were uploaded to the RI/FS project database upon receipt of the validated data (as described in the RI/FS Progress Reports) and are available for download by EPA. The results of the Round 2 sampling are summarized in the following tables and figures provided as attachments to this e-mail:

- Tables 1 through 6 summarize the Round 1 and Round 2 surface water results;
- Tables 7 through 10 summarize the Round 1 and Round 2 groundwater data;
- Plate 1 presents a map depicting groundwater elevations and flow directions;
- Plates 2 and 3 present thematic dot maps depicting surface water concentrations of cyanide and fluoride;
- Plates 4 and 5 present thematic dot maps depicting groundwater concentrations of cyanide and fluoride; and
- Plates 6 and 7 present maps depicting the migration of cyanide and fluoride in groundwater.

The potentiometric surface contour map from Round 2 (Plate 1) indicates that groundwater in the upper hydrogeologic unit flows towards the Flathead River and, overall, remains consistent with the flow direction observed during Round 1 that is described within Phase I Data Summary Report.

The Round 2 surface water and groundwater laboratory data indicate that the analytical results are generally consistent with Round 1 data, including:

- Concentrations of cyanide in surface water were detected above the MDEQ Circular 7 (DEQ-7) Human Health and Aquatic Life Surface Water Standards in the backwater seep area (Plate 2), which is consistent with historical data collected as part of the MPDES permit sampling at the Site. Cyanide was not detected in any of the samples collected downstream of the backwater seep area or in any samples from the main stem of the Flathead River. Fluoride was detected in all Round 2 surface water samples at concentrations less than the EPA Maximum Contaminant Level (MCL) and DEQ-7 human health standard (Plate 3).
- The highest concentrations of cyanide in groundwater were observed in monitoring wells screened in the upper hydrogeologic unit near the West Landfill, Wet Scrubber Sludge Pond, and Former Drum Storage Area (Plate 4). Concentrations decrease in a southerly direction from the landfill source area towards the Flathead River (Plate 5). There are no detections of cyanide in groundwater samples from monitoring wells immediately adjacent to Aluminum City. The attached Plates 6 and 7 compare the concentrations of total cyanide and fluoride, respectively, in groundwater from Rounds 1 and 2.

As discussed with EPA, the results of the Round 3 sampling recently completed in March/April will be provided via email following receipt of the validated results; and, a report summarizing the results of all four surface water and groundwater sampling events will be provided after Round 4 of groundwater and surface water sampling is complete. Please feel free to reach out if you have any questions.

Michael Ritorto | Principal Hydrogeologist/Office Manager | Roux Associates, Inc.

209 Shafter Street, Islandia, NY 11749

Main: 631-232-2600 | Direct: 631-630-2370

Email: mrirtorto@rouxinc.com | Website: www.rouxinc.com



***Environmental Consulting
& Management***

We solve our clients' most challenging environmental problems

NOTICE: This electronic communication, including any authorized attachments, contains information that may be legally privileged, protected, confidential and/or exempt from disclosure or certain types of use under applicable law. This information is for the sole use of the intended recipient(s). If you are not the intended recipient(s) or the employee or agent responsible for delivery of this message to the intended recipient(s), you are hereby notified that any review, use, disclosure, copying, distribution or the taking of any action in reliance on the contents of this e-mail or any attachments is strictly prohibited. You are further advised that review by an individual other than the intended recipient(s) shall not constitute a waiver of any attorney-client privilege which may apply to this communication. If you have received this communication in error, please notify the sender immediately by return e-mail, permanently delete this e-mail and any attachments from all computers on which they may be stored and destroy any print-outs of this email and any attachments.